Case 8837Q

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of	:	
R.D. CRAMER ET AL.	:	
Serial No. 10/060,694	:	Group Art Unit 1762
Filed January 30, 2002	:	Examiner M.L. Padgett
Confirmation No. 7032		

For METHOD OF HYDROPHILIZING MATERIALS

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I, Ronald Dean Cramer, of Cincinnati, Ohio, the undersigned, hereby declare as follows:

All statements made herein are true to the best of my knowledge, or, if made upon information and belief, are believed to be true.

I am a graduate of Purdue University having received a Bachelor's degree in chemical engineering from said institution in 1988. Since 1988, I have been employed by The Procter & Gamble Company of Cincinnati, Ohio, assignee of the present application, where I am currently an Associate Director in the area of disposable diapers. I have worked in the area of baby care with a focus on absorbency technology and diaper design.

I am also a member of the INDA Technical Advisory Board. INDA, The Association of the Nonwoven Fabrics Industry, represents North America's nonwoven fabric industries.

I am a co-inventor of the above-referenced application. Accordingly, I am familiar with the subject matter, including the claims of the present application.

I am familiar with the teachings contained in the European Disposables and Nonwovens Association (EDANA) standardized test 150.3-96, Liquid Strike-Through Time. EDANA represents Europe's nonwovens and absorbent hygiene products industries and suppliers. One of EDANA's activities includes formulation and publication of standardized test methods for the nonwovens industry. EDANA is an industry recognized source of compendial methods for the evaluation of nonwovens.

EDANA's standardized tests are frequently adapted, used, and referenced outside of EDANA's 26 member countries.

A liquid strike-through test measures the time it takes for a specified volume of liquid to pass through a fabric, including a nonwoven fabric, which is in contact with an absorbent structure. This time is referred to as the strike-through time. It is my belief that such information would be known by a like engineer or scientist in the absorbent products industry.

The EDANA method 150.3-96 clearly describes a specific technique for determining strike-through time. This EDANA method provides ample detail by which to perform a liquid strike-through test. A copy of EDANA method 150.3-96 is attached. It is my belief that EDANA method 150.3-96 would be known or easily retrievable by a like engineer or scientist in the absorbent products industry.

This declaration is made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both under 18 U.S.C. §1001, and may jeopardize the validity of the above-referenced application or any patent issuing thereon.

Further Declarant sayeth not.

Respectfully submitted,

By _____

Ronald Dean Cramer

July 23, 2004

Date

18 U.S.C. § 1001. Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

edana

LIQUID STRIKE-THROUGH TIME
ǂ 150.3-96

RECOMMENDED TEST : NONWOVEN COVERSTOCK LIQUID STRIKE-THROUGH TIME (SIMULATED URINE)

A. SCOPE

This test method measures the strike-through time, i.e. the time taken for a known volume of liquid (simulated urine) applied to the surface of a test piece of nonwoven coverstock, which is in contact with an underlying standard absorbent pad, to pass through the nonwoven.
This test method is only designed to compare strike-through time of nonwoven coverstocks. It is not intended to simulate in-use conditions of finished products.

B. TESTING CONDITIONS

Condition the samples of nonwoven and the filter papers to be used as the standard absorbent pad for 24 h and test at 65 ± 2% relative humidity and 20 ± 2°C (according to ERT 60.1-75).

C. RECOMMENDED METHOD

ISO 9073-8: 1995 "Textiles - Test method for nonwovens" Part 8 :Determination of liquid strike-through time (simulated urine)

D. PRINCIPLE

A specified quantity of simulated urine is discharged at a prescribed rate under specified conditions onto a test piece of nonwoven which is superimposed on a reference absorbent pad. The time taken for all the liquid dose to penetrate the nonwoven is measured electronically.

E. EQUIPMENT

Reference absorbent pad — Consisting of five layers of reference filter paper (100 mm x 100 mm) with the smooth side uppermost and having a mean strike-through time, in 10 determinations without the nonwoven, of (3 ± 0,5)s. [Reference filter paper: ERT FF3 w/s filter paper supplied by Hollingsworth & Vose Company Ltd.]

Simulated Urine — Prepare solution of 18 g (± 0,01)g of sodium chloride, and dilute to 2 litres with distilled water. Stir for approximately 5 minutes with a magnetic bar to ensure solution. The surface tension of this liquid should be 70 ± 2 mN/m at 20 ± 2°C (see also note *).
This surface tension should be checked before each series of tests because of the risk of alterations to the surface tension during storage. Use at temperature of 20 ± 2°C.

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* The surface tension of adult human urine is published as 69 to 70 mN/m. There is a suggestion that some babies' urine could have a lower surface tension (e.g. 45 mN/m). The surface tension of the simulated urine be adjusted by the addition of a surfactant. In this case it should be reported as a deviation from standard procedure and the surface tension should be stated in the report.

Burette and supporting stand	—	50 ml capacity
Funnel fitted with magnetic valve	—	Rate of discharge of 25 ml in 3,5 (± 0,25) seconds
Ring stand	—	to support the funnel
Electronic Timer	—	Measuring to 0,01 seconds
Strike-through plate	—	Constructed of 25 mm thick acrylic glass as shown in the diagram. The total weight of the plate must be 500 g. The electrodes should be of non-corrosive material and must be kept clean. Platinum or stainless steel wire, 1,6 mm in diameter, is recommended. Care must be taken that the electrodes are positioned exactly as specified. The electrodes are set in (4,0 mm x 7,0 mm) cross section grooves, cut in the base of the plate and fixed with quick setting epoxy resin.
Base plate	—	A square of acrylic glass (e.g. Plexiglass® or Perspex®) 125 mm x 125 mm approximately.

REMARK. It should be noted that the sensitivity of the timing mechanism is such that different apparatus could give results on the low or high side of the specification for the standard absorbent pad alone.
Users of the method are therefore advised to validate their equipment against the results of the producer of the filter paper.

F. PROCEDURE

1. Set up the ring stand holding the funnel and position the burette with the tip inside the funnel.

2. The reference absorbent pad for each test should be 5 plies of ERT FF3 w/s filter paper, 100 mm x 100 mm, with the smooth sides uppermost.

   NOTE. This test carried out on five plies of ERT FF3 w/s filter paper without nonwoven should give an average strike-through time of 3 ± 0,5 seconds for ten results, using simulated urine as described above.

3. Cut the required number of pieces of nonwoven, 125 mm x 125 mm, test pieces being selected in accordance with ERT 130.2-89 if applicable.

4. Condition the test pieces and filter papers according to ERT 60.1-75 if applicable.

5. Place one nonwoven test piece on one set of 5 plies of filter paper on the base plate. The nonwoven should be put on the filter paper in such a way that the side of the nonwoven which is intended to be in contact with the user's skin is uppermost. Place the strike-through plate on top with the centre of the plate over the centre of the test piece. Centre the burette and the funnel over the plate.

6. Adjust the height of the funnel so that it is (5 ± 0,5) mm above the top of the cavity in the plate (i.e. 30 mm above the test piece).

7. Ensure the electrodes are connected to the timer. Switch on the timer and set the clock to zero.

8. Fill the burette with simulated urine. Keep the discharge valve of the funnel closed and run 5,0 ml of liquid from the burette into the funnel.

9. Open the magnetic discharge valve of the funnel to discharge 5,0 ml of liquid. The initial flow of liquid will complete the electrical circuit and start the timer. It will stop when the liquid has penetrated into the pad and fallen below the lever of the electrodes in the strike-through plate.

10. Record the time indicated on the electronic timer.

11. Repeat for the required number of test pieces. (A minimum of 10 tests on test pieces from each specimen is recommended.)

G. REPORT

1. The type of material.

2. If required, surfactant added and surface tension of simulated urine.

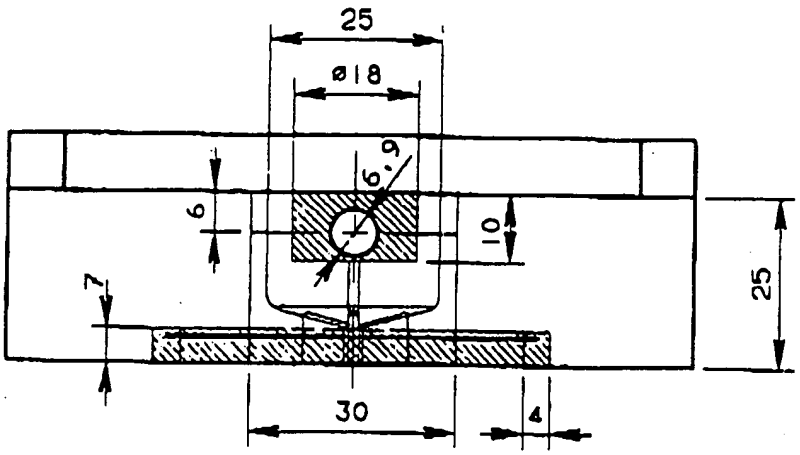
3. The number of test pieces tested.

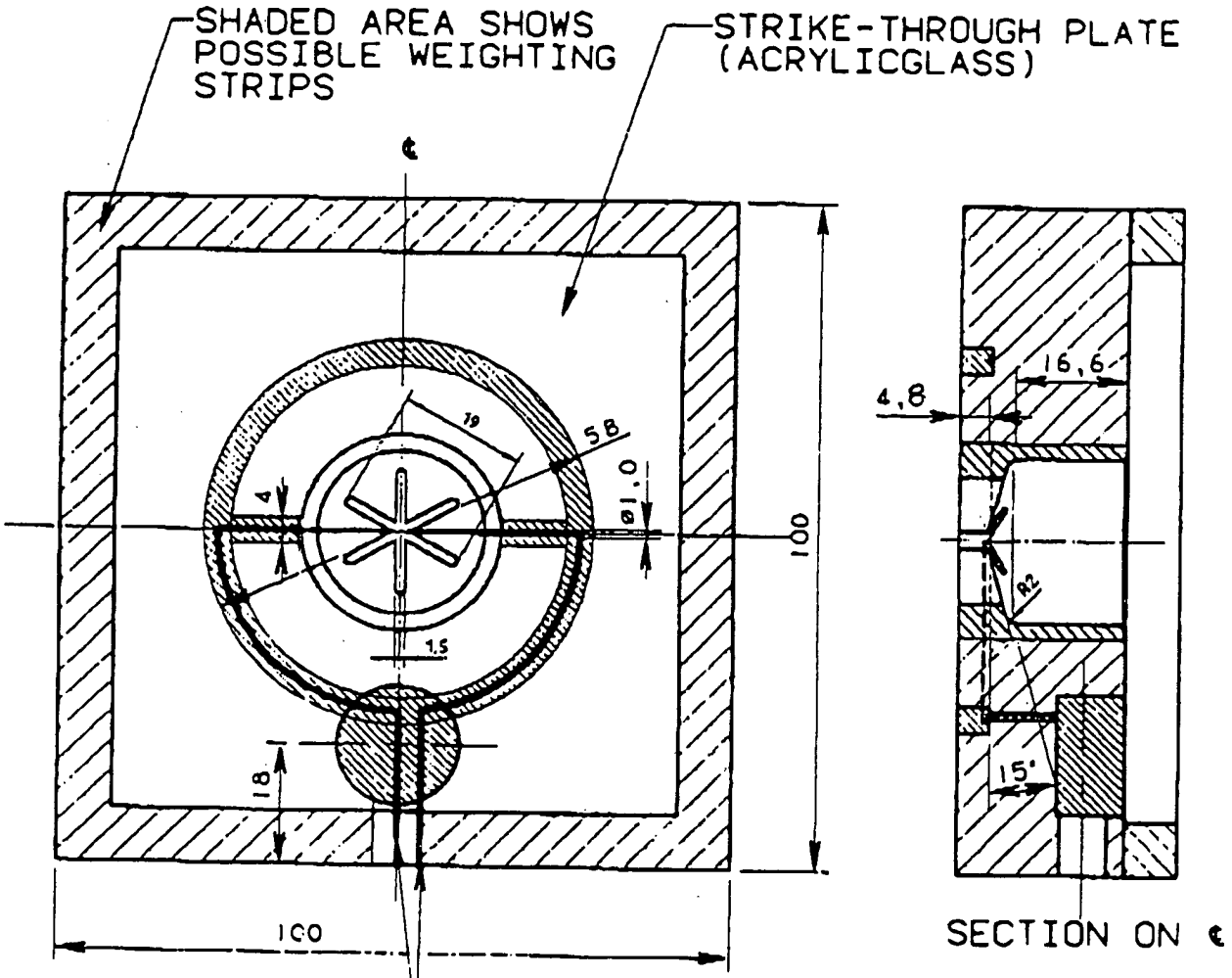
4. Individual strike-through times, in seconds.

5. Average strike-through times, in seconds.

6. Standard deviation of results.

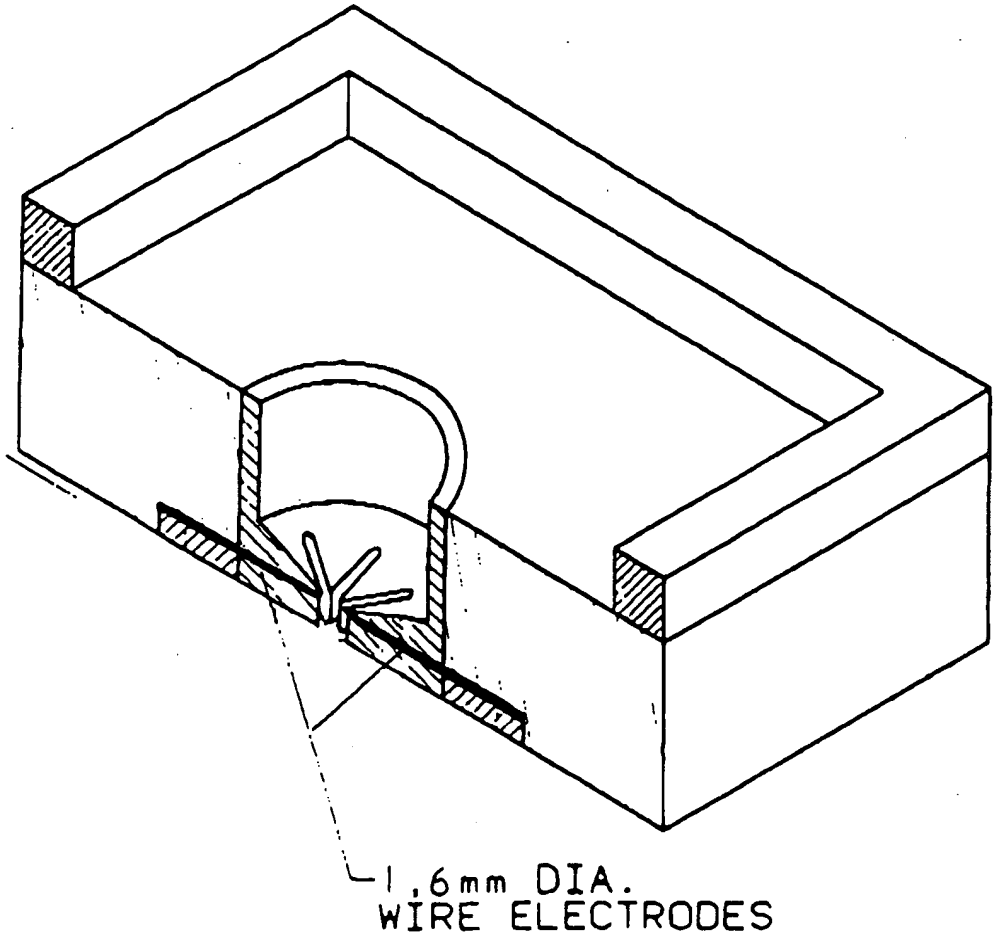
7. Any deviation from the standard procedure.





ELECTRODES: 1.6mm DIA. STAINLESS STEEL WIRE SET IN 4.0mm x 7.0mm GROOVES CUT IN THE BOTTOM OF THE PLATE AND ADHERED WITH QUICK SETTING EPOXY RESIN

STRIKE-THROUGH PLATE



SECTION ACROSS STRIKE-THROUGH PLATE
ON CENTRE LINE OF 25mm DIA. CAVITY